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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

METZMAIER, DANIEL S

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 09/11/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/622,781

Applicant(s)

LIANG, ZHI-ZHONG

Examiner

Daniel S. Metzmaier

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1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 12 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 21-31 is/are allowed.
- 6) ☐ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claims 1-31 are pending in the instant application. The preliminary amendment filed November 12, 2000 has been entered as Paper No. 5.

Priority

1. An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification or in an application data sheet (37 CFR 1.78(a)(2) and (a)(5)).
2. Receipt is acknowledged of papers received in this national stage application from the International Bureau (PCT Rule 17.2(a)), submitted under 35 U.S.C. 119(e), which papers have been placed of record in the file.

Claim Objections

3. Claim 2 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The limitation "up to about 50 wt% of the bitumen" would include zero. Please see MPEP 2173.05(c). It has been held that the term "up to" includes zero as a lower limit, *In re Mochel*, 470 F.2d 638, 176 USPQ 194 (CCPA 1974). Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 7-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 7-20 are indefinite because it is unclear how applicant is "stressing" and/or what is "effected". It is unclear whether the scope of the term "converting" is to be further defined as "stressing". The concentrations of claims 14 and 15 are rendered indefinite because it is unclear whether said concentrations are the concentrations prior to the "converting step", which includes "dewatering" as evidenced in claim 8, or after "the converting step". Dewatering would be expected to materially change the alkaline and the lignin content and the active concentrations set forth in claims 14 and 15 when compared to the added concentrations of the "spent pulping liquor".

Claim 11 is indefinite because it is unclear what applicants intend as the structure of "fatty acid linear alkyl sulfonate". It is unclear whether applicants intend a sulfonated fatty acid or a fatty alkyl sulfonate.

Claim 15 is indefinite because "the black liquor" lacks proper antecedent basis in either claim 14 or claim 7, which it depends directly or indirectly. It is further unclear what the amount of black liquor is based. It is implied that the wt% is based on the composition as a whole but said basis should be explicit.

Claim 18 is indefinite since it is unclear what applicant intends by the limitation "effected by stressing at elevated temperature". It is unclear how or what applicant is stressing.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 7 and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Richter et al, US 1,738,798. Richter et al (page 1, right column; page 2, left column; and claims) discloses dispersing alkaline waste liquor into petroleum oil in making ink. Said liquors include (page 2, lines 8-10; and claim 6) Kraft sulfate waste liquors and alkaline sulfite waste liquors. The agitation (page 1, lines 56-70) disclosed reads on the step of converting. The petroleum oil reads on the claimed lubricating oil. The alkaline sulfite waste liquor reads on the claimed black liquor from a Kraft pulp mill.
7. Claims 1-3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Pitchford, US 3,345,193. Pitchford (abstract, column 2, lines 49 et seq; example and claims) discloses and claimed compositions that are the combination of a nonionic asphalt emulsion and a sulfate or Kraft process liquor from the pulping of wood. The concentrations of claims 2 and 3 at least overlap those disclosed and claimed in the Pitchford reference and therefore read of said ranges. The limitation of "stably dispersed" reads on the blends that are as exemplified, stable for at least 24 hours in many instances.
8. Detroit, US 4,293,459, is considered cumulative to Pitchford for claims 1-3 and 6. It is noted that the Detroit reference does not disclose anhydrous compositions of spent pulping liquor dispersed in a lubricating oil or in bitumen (see claims 4 and 5).
9. Claims 1-11 and 13-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Pounder Emulsions Ltd. Canada (hereafter Pounder Emulsions), CA 1,163,758.

Pounder Emulsions (abstract examples and claims; particularly example 6) discloses compositions and methods reading on the instant application.

It is noted, the concentrations of the claims 2, 3 and 14 are directed to the liquor but the liquor as evidenced by claim 4 may include a lubricating oil, as well as other ingredients, e.g., solids and some water. The concentrations claimed in claims are deemed to read on those disclosed and claimed in the Pounder Emulsions reference.

Applicant characterizes the lubricating oil set forth in the claims (page 5, lines 15-28) as re-refined waste motor oil or refined mineral oil having a consistency from thin liquid to grease-like substances. Pounder Emulsions (example 6) discloses the use of No. 2 fuel oil, which is diesel oil and reads on applicant's characterization of lubricating oil.

The claims employ the transition language "comprising", which is open to other ingredients and/or steps in the methods. The specification does not disclose the degree that the "dewatered lignin-containing spent alkaline pulping liquor" is dewatered. Said limitation reads on the Kraft soap skimmings disclosed in the Pounder Emulsions reference. Said skimmings are characterized as including black liquor solids. The resin and fatty acids and fatty acid linear alkyl sulfonates present are inherently the (anionic) surfactants claimed in claims 9 and 10. The claims included in this rejection do not exclude the presence of the bitumen in claims 7-11 and 13-14.

Allowable Subject Matter

10. Claim 16-20 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

11. Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. Claims 21-31 are allowed.

13. The following is a statement of reasons for the indication of allowable subject matter: the methods employing a two step process of dehydrating the lignin-containing alkaline pulping liquor in a lubricating oil to produce an anhydrous dispersion followed by blending said lubricating oil dispersion with bitumen is not disclosed or fairly suggested in the prior art.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (703) 308-0451. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson can be reached on (703) 308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are (703)

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872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


Daniel S. Metzmaier
Primary Examiner
Art Unit 1712

DSM
September 9, 2002